



# C E R T I F I C A T E

**Certificate no.** 17-SIL-0010008-01-TIC

WE HEREBY CERTIFY THAT

*Product description*

**PNEUMATIC SCOTCH-YOKE DOUBLE ACTING  
ACTUATORS**

*Models*

**SERIES ALGA**

*Manufacturer*

**BIFFI ITALIA S.r.l.**

**Loc. Caselle S. Pietro – 29017 Fiorenzuola d'Arda PC**

IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE STANDARDS

**IEC 61508 Parts 1÷7:2010**

AS RESULT OF THE ASSESSMENT ACCORDING TO THE PROVISION  
SET OUT IN THE ABOVE-MENTIONED STANDARDS

*Summary Report no.* **RC-0417-SIL-TIC-PC-0010008-17-02**

*Expiry date*

**17.04.2020**

**Note**

This certificate is issued upon the request of the manufacturer as voluntary certification; it does not include the product inspection nor the production surveillance. This certificate is valid for the documents evaluated, as referred in the summary report. This certificate does not allow the manufacturer to use the safety mark of TÜV INTERCERT.

Reggio Emilia, 18.04.2017



Eng. Andrea Vivi  
TÜV INTERCERT Certification Body

CERTIFICATE ■ CERTIFICATO ■ ZERTIFIKAT ■ SERTIFIKA ■ CERTIFICADO ■ گواهینامه ■ ΠΙΣΤΟΠΟΙΗΤΙΚΟ ■ 証明書 ■ 인증서 ■ شهادة

CERTIFICATE ■ CERTIFICATO ■ ZERTIFIKAT ■ SERTIFIKA ■ CERTIFICADO ■ گواهینامه ■ ΠΙΣΤΟΠΟΙΗΤΙΚΟ



# C E R T I F I C A T E

ANNEX to Certificate no. 17-SIL-0010008-01-TIC

Type	A
HFT	0
Safety functions	1. Delivery of a full stroke ( $90^\circ \pm$ tolerance) driven by the piston of cylinder, powered by the specified medium working pressure
Mode of operation	Low Demand Mode

Random failure rates				
Configuration	Safety function	$\lambda_{DU}$ [1/h]	$\lambda_{DD}$ [1/h]	$\lambda_S$ [1/h]
ALGA - No PST	1	1,96E-08	0,00E+00	0,00E+00
ALGA - With PST	1	1,76E-09	1,78E-08	0,00E+00

Systematic capability	3 (Route 1 <sub>S</sub> applied)			
Architectural constraints	Route 1 <sub>H</sub> :	Applied	Route 2 <sub>H</sub> :	Applied
	The product can be used in: <ul style="list-style-type: none"><li>single channel configuration:<ul style="list-style-type: none"><li>up to SIL 2 without external diagnostic tests</li><li>up to SIL 3 considering external diagnostic tests</li></ul></li><li>double channel configuration: up to SIL 3</li></ul>			

**Remarks:**

- For further details, including environmental conditions, limitations of use, lifetime, failure rates traceability, mean repair times, common cause factors and systematic capability constraints, make reference to Safety Manual SM 001.

END OF CERTIFICATE

Reggio Emilia, 18.04.2017

Eng. Andrea Vivi  
TÜV INTERCERT Certification Body